

## NORMALIZATION

**Class: DAMG6210**  
**CRN: 16149**

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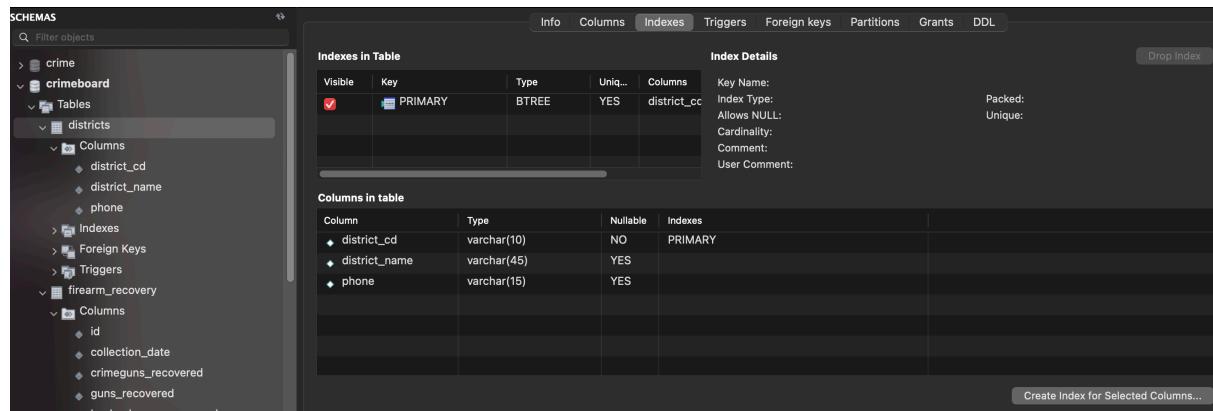
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### 1<sup>st</sup> Normal Form:

#### Crimeboard.districts table:

1. We have district\_cd as the primary key in the districts table:



The screenshot shows the 'districts' table structure in the 'Crimeboard' schema. The table has three columns: 'district\_cd' (primary key, type varchar(10), nullable NO), 'district\_name' (type varchar(45), nullable YES), and 'phone' (type varchar(15), nullable YES). A primary index named 'PRIMARY' is defined on the 'district\_cd' column.

Column	Type	Nullable	Indexes
district_cd	varchar(10)	NO	PRIMARY
district_name	varchar(45)	YES	
phone	varchar(15)	YES	

2. There are no multi value attributes in our data (each district code will have one district name and phone no):

	<b>district_...</b>	<b>district_name</b>	<b>phone</b>
►	A1	Downtown	(617) 343-4240
	A15	Charlestown	(617) 343-4888
	A7	East Boston	(617) 343-4220
	B2	Roxbury	(617) 343-4270
	B3	Mattapan	(617) 343-4700
	C11	Dorchester	(617) 343-4330
	C6	South Boston	(617) 343-4730
	D14	Brighton	(617) 343-4260
	D4	South End	(617) 343-4250
	E13	Jamaica Plain	(617) 343-5630
	E18	Hyde Park	(617) 343-5600
	E5	West Roxbury	(617) 343-4560
	External	External	NULL
	NULL	NULL	NULL

3. As noticed in the above screenshot, there are no repeating groups in the columns

#### Crimeboard.Firearm\_recovery table:

1. We have id as the primary key in the firearm recovery table:

The screenshot shows the MySQL Workbench interface with the following details:

- Sidebar:** Shows the database structure with tables like crime, crimeboard, districts, and firearm\_recovery.
- Indexes in Table:**

Visible	Key	Type	Uniq...	Columns
✓	PRIMARY	BTREE	YES	id
- Index Details:**
  - Key Name:
  - Index Type:
  - Allows NULL:
  - Cardinality:
  - Comment:
  - User Comment:
- Columns in table:**

Column	Type	Nullable	Indexes
id	int	NO	PRIMARY
collection_date	datetime	YES	
crimeguns_recove...	int	YES	
guns_recovered	int	YES	
buybackguns_rec...	int	YES	

2. There are no multi value attributes in our data (each id will have one collection date and individual no of guns as per the column):

<b>id</b>	<b>collection_date</b>	<b>crimeguns_recover...</b>	<b>guns_recover...</b>	<b>buybackguns_recover...</b>
20818	2014-08-19 00:00:00	292	134	369
20819	2014-08-20 00:00:00	2	3	1
20820	2014-08-21 00:00:00	2	0	4
20821	2014-08-22 00:00:00	0	0	2
20822	2014-08-25 00:00:00	8	3	0
20823	2014-08-26 00:00:00	9	0	0
20824	2014-08-27 00:00:00	1	0	0
20825	2014-08-28 00:00:00	0	9	5
20826	2014-08-29 00:00:00	2	0	1
20827	2014-09-02 00:00:00	2	0	0
20828	2014-09-03 00:00:00	5	0	2
20829	2014-09-04 00:00:00	2	0	0
20830	2014-09-05 00:00:00	3	0	0
20831	2014-09-08 00:00:00	2	0	0
20832	2014-09-09 00:00:00	1	0	0

3. There are no repeating groups in the firearm recovery table as noticed above.

#### Crimeboard.incidents table:

1. We have primary key incident\_number in the incidents table:

Visible	Key	Type	Uniq...	Columns	Index Details
<input checked="" type="checkbox"/>	PRIMARY	BTREE	YES	incident_n	Key Name: Index Type: Allows NULL: Cardinality: Comment: User Comment:
<input checked="" type="checkbox"/>	incidents_fk1_idx	BTREE	NO	offense_c	
<input checked="" type="checkbox"/>	incidents_fk2_idx	BTREE	NO	district	

Column	Type	Nullable	Indexes
incident_number	varchar(20)	NO	PRIMARY
offense_code	int	NO	incidents_fk1_idx
offense_code_group	int	YES	
offense_description	varchar(150)	NO	
district	varchar(10)	YES	incidents_fk2_idx
reporting_area	varchar(5)	YES	
shooting	int	NO	

2. There are some multi value attributes in incidents table as shown below:

incident_number	offense_code	offense_code_group	offense_description	district	reporting_area	shooting	occurred_on_date	year	month	day_of_week
222000057	423	NULL	ASSAULT - AGGRAVATED	B2		1	2022-01-01 00:00:00	2022	1	Saturday
222000342	111	NULL	MURDER, NON-NEGIGENT MANSLAUGHTER	C11	450	1	2022-01-02 00:00:00	2022	1	Sunday
22200343	423	NULL	ASSAULT - AGGRAVATED	B2		1	2022-01-02 00:00:00	2022	1	Sunday
222002059	423	NULL	ASSAULT - AGGRAVATED	B2		1	2022-01-10 00:00:00	2022	1	Monday
222002279	423	NULL	ASSAULT - AGGRAVATED	B2		1	2022-01-11 00:00:00	2022	1	Tuesday
222003887	423	NULL	ASSAULT - AGGRAVATED	C6		1	2022-01-18 00:00:00	2022	1	Tuesday
222005232	423	NULL	ASSAULT - AGGRAVATED	A7		1	2022-01-23 00:00:00	2022	1	Sunday
222010971	423	NULL	ASSAULT - AGGRAVATED	C6		1	2022-02-15 00:00:00	2022	2	Tuesday
222012303	423	NULL	ASSAULT - AGGRAVATED	B3		1	2022-02-19 00:00:00	2022	2	Saturday
222013916	423	NULL	ASSAULT - AGGRAVATED	C11		1	2022-02-26 00:00:00	2022	2	Saturday
222016123	423	NULL	ASSAULT - AGGRAVATED	D14		1	2022-03-07 00:00:00	2022	3	Monday
222016376	423	NULL	ASSAULT - AGGRAVATED	A7	907	1	2022-03-08 00:00:00	2022	3	Tuesday
222016718	423	NULL	ASSAULT - AGGRAVATED	C11		1	2022-03-09 00:00:00	2022	3	Wednesday
222019112	423	NULL	ASSAULT - AGGRAVATED	C11		1	2022-03-19 00:00:00	2022	3	Saturday
222019622	423	NULL	ASSAULT - AGGRAVATED	B3		1	2022-03-21 00:00:00	2022	3	Monday

Here we can link offense\_code of incidents table to offense table and get the corresponding code group and description:

Similarly, we need to remove fields like year, month, and day\_of\_week, as these can be derived from occurred\_on\_date. We can achieve this using the following SQL statement:

```
ALTER TABLE `crimeboard`.`incidents`
DROP COLUMN `day_of_week`,
DROP COLUMN `month`,
DROP COLUMN `year`,
DROP COLUMN `offense_description`,
DROP COLUMN `offense_code_group`;
```

Table post conversion:

incident_number	offense_code	district	reporting_area	shooting	occurred_on_date	hour	ucr_part	street	lat	long	city
222000057	423	B2		1	2022-01-01 00:00:00	4	NULL	CHENEY ST	42	-71	NULL
222000342	111	C11	450	1	2022-01-02 00:00:00	18	NULL	WASHINGTON ST	42	-71	NULL
22200343	423	B2		1	2022-01-02 00:00:00	18	NULL	NORMANDY ST	42	-71	NULL
222002059	423	B2		1	2022-01-10 00:00:00	20	NULL	DUDLEY ST	42	-71	NULL
222002279	423	B2		1	2022-01-11 00:00:00	22	NULL	CASTLEGATE RD & NORMANDY ST	42	-71	NULL
222003887	423	C6		1	2022-01-18 00:00:00	18	NULL	JOYCE HAYES WAY	42	-71	NULL
222005232	423	A7		1	2022-01-23 00:00:00	20	NULL	SARATOGA ST	42	-71	NULL
222010971	423	C6		1	2022-02-15 00:00:00	1	NULL	MASSACHUSETTS AVE	42	-71	NULL
222012303	423	B3		1	2022-02-19 00:00:00	23	NULL	RIVER ST	42	-71	NULL
222013916	423	C11		1	2022-02-26 00:00:00	22	NULL	HANCOCK ST	42	-71	NULL
222016123	423	D14		1	2022-03-07 00:00:00	16	NULL	JETTE CT	42	-71	NULL
222016376	423	A7	907	1	2022-03-08 00:00:00	16	NULL	BORDER ST	42	-71	NULL
222016718	423	C11		1	2022-03-09 00:00:00	22	NULL	DORCHESTER AVE	42	-71	NULL
222019112	423	C11		1	2022-03-19 00:00:00	0	NULL	GENEVA AVE	42	-71	NULL
222019622	423	B3		1	2022-03-21 00:00:00	12	NULL	STANDARD ST	42	-71	NULL

Additionally, we have linked incident table and offense table through foreign key as per below:

```
DDL for crimeboard.incidents

1  CREATE TABLE `incidents` (
2      `incident_number` varchar(20) NOT NULL,
3      `offense_code` int NOT NULL,
4      `district` varchar(10) DEFAULT NULL,
5      `reporting_area` varchar(5) DEFAULT NULL,
6      `shooting` int NOT NULL,
7      `occurred_on_date` datetime NOT NULL,
8      `hour` int NOT NULL,
9      `ucr_part` int DEFAULT NULL,
10     `street` varchar(255) DEFAULT NULL,
11     `lat` int NOT NULL,
12     `long` int NOT NULL,
13     `city` varchar(50) DEFAULT NULL,
14     PRIMARY KEY (`incident_number`),
15     KEY `incidents_fk1_idx` (`offense_code`),
16     KEY `incidents_fk2_idx` (`district`),
17     CONSTRAINT `incidents_fk1` FOREIGN KEY (`offense_code`) REFERENCES `offense` (`offense_code`),
18     CONSTRAINT `incidents_fk2` FOREIGN KEY (`district`) REFERENCES `districts` (`district_cd`),
19     CONSTRAINT `incidents_fk3` FOREIGN KEY (`incident_number`) REFERENCES `shooting` (`incident_number`)
```

3. Post conversion, we observe that there are no repeating groups as we have even removed the day of week, month, year etc.

### Crimeboard.offense table:

1. We have primary key offense\_code in the offense table:

Visible	Key	Type	Uniq...	Columns
<input checked="" type="checkbox"/>	PRIMARY	BTREE	YES	offense_code

Column	Type	Nullable	Indexes
offense_code	int	NO	PRIMARY
offense_desc	varchar(150)	YES	

2. There are no multi value attributes as shown below:

	offen...	offense_desc
►	111	MURDER, NON-NEGLIGENT MANSLAUGHTER
	112	KILLING OF FELON BY POLICE
	113	KILLING OF FELON BY CITIZEN
	114	KILLING OF POLICE BY FELON
	121	MANSLAUGHTER - VEHICLE - NEGLIGENCE
	122	MANSLAUGHTER - TRAIN ETC. VICTIM NON-...
	123	MANSLAUGHTER - NON-VEHICLE - NEGLIG...
	124	MANSLAUGHTER - VEHICLE - NEGLIGENCE...
	125	MANSLAUGHTER - TRAIN ETC. VICTIM NEG...
	211	RAPE - FEMALE - FORCE
	212	RAPE - MALE - FORCE
	213	RAPE - FEMALE/MALE - FORCE - UNNATUR...
	222	RAPE - FEMALE ATTEMPT FORCE
	223	RAPE - MALE - ATTEMPT FORCE
	224	RAPE - FEMALE/MALE - ATTEMPT FORCE -...

3. As seen above, there are no repeating groups as well.

Crimeboard.shooting table:

1. We have primary key incident\_number in shooting table:

Indexes in Table		Index Details			
Visible	Key	Type	Uniq...	Columns	Key Name:
✓	PRIMARY	BTREE	YES	incident_n	Index Type: Allows NULL: Cardinality: Comment: User Comment:
✓	shooting_index1	BTREE	NO	incident_n	Packed: Unique:

Column	Type	Nullable	Indexes
incident_number	varchar(20)	NO	PRIMARY, shooting_index1
shooting_date	datetime	YES	
district_cd	varchar(4)	NO	
shooting_type	varchar(45)	YES	
victim	varchar(45)	YES	
victim_gender	varchar(45)	YES	
victim_race	varchar(45)	YES	
multi_victim			

2. There are no multi value attributes as shown below:

incident_number	shooting_date	district_cd	shooting_type	victim	victim_gender	victim_race	victim_ethnicity	multi_vict...
222000057	2022-01-01 04:20:16	B2	Non-Fatal	NULL	Male	Unknown	Hispanic or Latinx	f
222000342	2022-01-02 18:25:12	C11	Fatal	NULL	Female	Black or African American	NULL	t
222000343	2022-01-02 18:12:19	B2	Non-Fatal	NULL	Male	Black or African American	Not Hispanic or Latinx	f
222002059	2022-01-10 20:57:00	B2	Non-Fatal	NULL	Male	Black or African American	Hispanic or Latinx	t
222002279	2022-01-11 22:26:00	B2	Non-Fatal	NULL	Male	Black or African American	Unknown	f
222003887	2022-01-18 18:51:10	C6	Non-Fatal	NULL	Male	White	NULL	f
222005232	2022-01-24 20:18:00	A7	Non-Fatal	NULL	Male	Black or African American	Not Hispanic or Latinx	f
222010971	2022-02-15 01:56:00	C6	Non-Fatal	NULL	Male	White	Hispanic or Latinx	f
222012303	2022-02-19 23:12:00	B3	Non-Fatal	NULL	Female	Black or African American	Not Hispanic or Latinx	t
222013916	2022-02-26 22:43:00	C11	Non-Fatal	NULL	Male	White	Not Hispanic or Latinx	f
222016123	2022-03-07 16:33:00	D14	Non-Fatal	NULL	Male	Black or African American	NULL	f
222016376	2022-03-08 16:24:00	A7	Non-Fatal	NULL	Male	Unknown	Hispanic or Latinx	f
222016718	2022-03-09 22:57:00	C11	Non-Fatal	NULL	Male	Black or African American	Hispanic or Latinx	f
222019112	2022-03-19 00:03:00	C11	Non-Fatal	NULL	Male	White	Hispanic or Latinx	f
222019622	2022-03-21 02:18:00	B3	Non-Fatal	NULL	Female	White	Hispanic or Latinx	f

3. There are no repeating groups as well

### Crimeboard.shots\_fired table:

1. We have primary key incident\_id in the shots\_fired table:

Visible	Key	Type	Uniq...	Columns	Key Name:
<input checked="" type="checkbox"/>	PRIMARY	BTREE	YES	incident_id	Index Type: Allows NULL: Cardinality: Comment: User Comment:
<input checked="" type="checkbox"/>	shots_fired_index1	BTREE	NO	district_cc	

Column	Type	Nullable	Indexes
incident_id	int	NO	PRIMARY
incident_number	varchar(20)	NO	
incident_date	datetime	YES	
district_cc	varchar(10)	YES	shots_fired_index1
ballistics_evidence	varchar(1)	YES	

2. There are no multi value attributes as shown below:

	incident_id	incident_number	incident_date	district_cd	ballistics_evidence
►	37071	I152000093-00	2015-01-01 04:17:00	C11	f
	37072	I152000042-00	2015-01-01 00:05:00	A15	f
	37073	I152000514-00	2015-01-02 15:51:00	B3	t
	37074	I152000965-00	2015-01-04 15:30:00	B2	t
	37075	I152000872-00	2015-01-04 00:13:00	B2	f
	37076	I152000856-00	2015-01-03 23:57:00	B2	f
	37077	I152000600-00	2015-01-02 22:25:00	E13	f
	37078	I152001379-00	2015-01-05 22:00:00	C6	f
	37079	I152001625-00	2015-01-06 19:39:00	B3	t
	37080	I152001947-00	2015-01-08 12:30:00	B3	t
	37081	I152002240-00	2015-01-09 02:09:00	A1	f
	37082	I152002410-00	2015-01-09 17:59:00	C11	t
	37083	I152002965-00	2015-01-12 03:43:00	A1	t
	37084	I152002504-00	2015-01-10 01:35:00	B2	t
	37085	I152002524-00	2015-01-10 03:40:00	B2	f

Additionally we have linked this table to district table using foreign key as shown below:

```
DDL for crimeboard.shots_fired
1   ⊕ CREATE TABLE `shots_fired` (
2     `incident_id` int NOT NULL AUTO_INCREMENT,
3     `incident_number` varchar(20) NOT NULL,
4     `incident_date` datetime DEFAULT NULL,
5     `district_cd` varchar(10) DEFAULT NULL,
6     `ballistics_evidence` varchar(1) DEFAULT NULL,
7     PRIMARY KEY (`incident_id`),
8     KEY `shots_fired_index1` (`district_cd`),
9     CONSTRAINT `shots_fired_fk1` FOREIGN KEY (`district_cd`) REFERENCES `districts` (`district_cd`)
10    ) ENGINE=InnoDB AUTO_INCREMENT=44485 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci
```

3. As shown above there are no repeating groups in this table.

## 2<sup>nd</sup> Normal Form:

### Crimeboard.districts table:

There are no partial dependencies in this table as both district name and phone are related to district code:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
district_cd	varchar(10)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
district_name	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
phone	varchar(15)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

### Crimeboard.Firearm\_recovery table:

There are no partial dependencies in this table as all the columns are related to id:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
buybackguns_rec...	int		YES			select,insert,update,references	
collection_date	datetime		YES			select,insert,update,references	
crimeguns_recove...	int		YES			select,insert,update,references	
guns_recovered	int		YES			select,insert,update,references	
id	int		NO			select,insert,update,references	auto_increment

### Crimeboard.incidents table:

Initially we had partial dependencies for offense description in incidents table, but we have fixed that using the below command as explained earlier. By dropping offense\_description and offense\_code\_group we have achieved this.

```
ALTER TABLE `crimeboard`.`incidents`  
DROP COLUMN `day_of_week`,  
DROP COLUMN `month`,  
DROP COLUMN `year`,  
DROP COLUMN `offense_description`,  
DROP COLUMN `offense_code_group`;
```

### Crimeboard.offense table:

There are no partial dependencies in this table as all the columns are related to offense\_code:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ offense_code	int		NO			select,insert,update,references	
◆ offense_desc	varchar(150)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

### Crimeboard.shooting table:

All the columns are related to incident\_number, and we have linked district\_cd via foreign key to district table:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ district_cd	varchar(4)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ incident_number	varchar(20)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ multi_victim	varchar(1)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ shooting_date	datetime		YES			select,insert,update,references	
◆ shooting_type	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim_ethnicity	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim_gender	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim_race	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

```
1  CREATE TABLE `shooting` (
2      `incident_number` varchar(20) NOT NULL,
3      `shooting_date` datetime DEFAULT NULL,
4      `district_cd` varchar(4) NOT NULL,
5      `shooting_type` varchar(45) DEFAULT NULL,
6      `victim` varchar(45) DEFAULT NULL,
7      `victim_gender` varchar(45) DEFAULT NULL,
8      `victim_race` varchar(45) DEFAULT NULL,
9      `victim_ethnicity` varchar(45) DEFAULT NULL,
10     `multi_victim` varchar(1) DEFAULT NULL,
11     PRIMARY KEY (`incident_number`),
12     KEY `shooting_index1` (`incident_number`),
13     KEY `shooting_fk_1_idx` (`district_cd`),
14     CONSTRAINT `shooting_fk_1` FOREIGN KEY (`district_cd`) REFERENCES `districts` (`district_cd`)
15 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci
```

### Crimeboard.shots\_fired table:

All the columns are related to incident\_id, so there are no partial dependencies:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ ballistics_evidence	varchar(1)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ district_cd	varchar(10)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ incident_date	datetime		YES			select,insert,update,references	
◆ incident_id	int		NO			select,insert,update,references	auto_increment
◆ incident_number	varchar(20)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	

### 3<sup>rd</sup> Normal Form:

### Crimeboard.districts table:

There are no transitive dependencies in this table

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ district_cd	varchar(10)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ district_name	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ phone	varchar(15)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

### Crimeboard.Firearm\_recovery table:

There are no transitive dependencies in this table

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ buybackguns_rec...	int		YES			select,insert,update,references	
◆ collection_date	datetime		YES			select,insert,update,references	
◆ crimeguns_recove...	int		YES			select,insert,update,references	
◆ guns_recovered	int		YES			select,insert,update,references	
◆ id	int		NO			select,insert,update,references	auto_increment

### Crimeboard.incidents table:

All transitive dependencies have been removed from this table.

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	
◆ city	varchar(50)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ district	varchar(10)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ hour	int		NO			select,insert,update,references	
◆ incident_number	varchar(20)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ lat	int		NO			select,insert,update,references	
◆ long	int		NO			select,insert,update,references	
◆ occurred_on_date	datetime		NO			select,insert,update,references	
◆ offense_code	int		NO			select,insert,update,references	
◆ reporting_area	varchar(5)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ shooting	int		NO			select,insert,update,references	
◆ street	varchar(255)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ ucr_part	int		YES			select,insert,update,references	

### Crimeboard.offense table:

No transitive dependencies in this table.

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ offense_code	int		NO			select,insert,update,references	
◆ offense_desc	varchar(150)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

### Crimeboard.shooting table:

All transitive dependencies have been removed from this table:

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ district_cd	varchar(4)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ incident_number	varchar(20)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ multi_victim	varchar(1)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ shooting_date	datetime		YES			select,insert,update,references	
◆ shooting_type	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim_ethnicity	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim_gender	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ victim_race	varchar(45)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	

## Crimeboard.shots\_fired table:

No transitive dependencies in this table.

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra
◆ ballistics_evidence	varchar(1)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ district_cd	varchar(10)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references	
◆ incident_date	datetime		YES			select,insert,update,references	
◆ incident_id	int		NO			select,insert,update,references	auto_increment
◆ incident_number	varchar(20)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references	